



west virginia department of environmental protection

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ENGINEERING EVALUATION / FACT SHEET

BACKGROUND INFORMATION

Application No.: R13-2306D
Plant ID No.: 033-00018
Applicant: Consolidation Coal Company
Facility Name: Robinson Run Preparation Plant
Location: Lumberport, Harrison County, WV
SIC Code: 1222 (Bituminous Coal & Lignite - Underground)
Application Type: Modification
Received Date: 1/4/10
Engineer Assigned: Dan Roberts
Fee Amount: \$2,000
Date Received: 1/6/10
Complete Date: 1/20/10
Applicant's Ad Date: 1/5/10
Newspaper: *The Exponent-Telegram*
UTM's: Easting: 554.82 km Northing: 4,361.54 km Zone: 17
Description: The purpose of this modification is to make the following changes to the refuse system: construct refuse conveyor C11C and refuse bin RB3; after-the-fact inclusion of refuse conveyors C11A and C11B and refuse bin RB2 constructed in 1981; increase the round trip distance for refuse trucking from 0.5 miles to the proposed 2.2 miles; and increase the maximum hourly throughput rate of the existing refuse system from 500 TPH to 800 TPH. The equipment list will also be updated to show as-built revisions to the facility: delete conveyor A0, which was constructed and then removed; delete previously permitted but not constructed conveyors C15, C22, C23, C7B, the reclaim feeder (056/057) for C7B and clean coal blending stockpile 054; and include existing equipment not currently in the permit (A3A - 1994; SC-3, CR1 and SC2 - 2002; and C7A - 2002).

DESCRIPTION OF PROCESS

Consolidation Coal Company ("Consol") proposes to modify their existing wet wash coal preparation plant located near Lumberport, Harrison County, WV. Permit R13-2306D will

supersede and replace Permit R13-2306C approved on September 21, 2004.

Consolidation Coal Company (Consol) proposes to add refuse conveyor C11C and refuse bin RB3; after-the-fact inclusion of refuse conveyors C11A and C11B and refuse bin RB2 constructed in 1981; and increase the hourly rate of the existing refuse system from 500 tons per hour (TPH) to 800 TPH. The use of the new refuse bin RB3 will result in an increased round trip distance for refuse trucking from the existing 0.5 miles to the proposed 2.2 miles, resulting in a fugitive emissions increase.

The facility also proposes to update the equipment list to show as-built revisions to the facility. Please see the equipment table below for the revised equipment list. The equipment list will be updated as follows: delete conveyor A0, which was constructed and then removed; delete previously permitted but not constructed conveyors C15, C22, C23, C7B, the reclaim feeder (056/057) for C7B and clean coal blending stockpile 054; and include existing equipment not currently in the permit (A3A - 1994; SC-3, CR1 and SC2 - 2002; and C7A - 2002).

Since the as-built revisions result in a decrease in the emission rate for transfer points emissions decrease, which results in an overall facility decrease in point source emissions, Consol proposes to advertise the revised facility potential to emit (PTE).

There are no yearly throughput changes proposed for the plant.

The facility shall be modified and operated in accordance with the following equipment and control device information taken from permit applications R13-2306D, R13-2306C, R13-2306B, R13-2306A and R13-2306 and any amendments thereto:

Source ID	Emission Point ID	Equipment Description	Design Capacity		Date of Construc- tion ¹	Control Device ID	Control Device ²
			TPH	TPY			
Raw Coal from Deep Mine Circuit							
MB1	E-MB1 (TP1)	Mine Portal Belt	5,000	15,768,000	2005	NA	FE
MB2	E-MB2 (TP2)	Silo Feed Belt	5,000	15,768,000	2005	NA	FE
MB3	E-MB3 (TP3)	Silo Transfer Belt	5,000	15,768,000	2005	NA	FE
RCS2	E-RCS2 (TP4)	Raw Coal Storage Silo 2 - 10,000 capacity	-----	15,768,000 combined	2005	NA	FE
RCS3	E-RCS3 (TP5)	Raw Coal Storage Silo 3 - 10,000 ton capacity	-----		2005	NA	FE
MB4	E-MB4 (TP6)	Silo Reclaim Belt	4,000	15,768,000	2005	NA	FE
MB5	E-MB5 (TP7)	Overland Mine Belt 1	4,000	15,768,000	2005	NA	FE
MB6	E-MB6 (TP8)	Overland Mine Belt 2	4,000	15,768,000	2005	NA	FE
A1	A003	Conveyor and Transfer Point	4,000	15,768,000	1994	DA003	FE
A2	A005	Conveyor and Transfer Point	4,000	15,768,000	1994	DA005	FE
A006	A006, A007	Scalping Screen A1 (rotary breaker building) and Transfer Points	4,000	15,768,000	1994	DA005	FE
A006A	A006A, A007A, A010	Rotary Breaker A1 (rotary breaker building) and Transfer Points (drop to A008, drop to rock bin, drop to pan)	1,000	3,942,000	1994	DA005, DA008	FE

010A	010A, A011	Rock Bin 1 - 100 ton capacity - and transfer point	-----	175,200	1994	DA008, D033	FE
A3A	A007A	Conveyor and Transfer Point	4,000	15,768,000	1994	DA005A	FE
A3	003B, A009	Conveyor and Transfer Point	4,000	15,768,000	1994	D004	FE
Raw Coal from Minecar/Truck Dump Building Circuit							
037 ³	037, 037A, 038, 039, 040, 041	Clean/Raw Coal Stockpile 2 - 240,000 ton capacity (wind erosion, grading, pan load-in, pan reclaim, truck load-in, endloader loadout)	-----	10,512,000	1968	N/A	MC
001 ³	001, 001C	Rotary Dump and Truck Dump	1,200	100,000	1968	D001	PE
001A ³	001A	Scalping Screen 1	1,200	100,000	1968	D002	FE
001B ³	001B	Crusher 1	1,200	100,000	1968	D002	FE
C1 ³ (002)	002A, 003B	Conveyor and Transfer Points (raw coal to silo or conveyor)	1,200	100,000	1968	D004	FE
003 ³	003A	Raw Coal Silo 1 - 6,000 ton capacity	-----	15,768,000	1968	D005	FE
C2 (004)	005	Conveyor and Transfer Point (raw coal to stockpile)	4,000	10,000,000	1994	D006	FE
006	006, 012, 006A, 042, 043	Raw Coal Stockpile 1 - 250,000 ton capacity (wind erosion, pan reclaim, grading, truck load-in, pan load-in)	-----	10,000,000	1968	D011	ST, UC
C3, C4	007, 009	Conveyors (2) and Transfer Points (plant feed)	2,800	15,768,000	2002	D007, D009	FE, PE(TP-007)
Prep Plant and Clean Coal Circuit							
060	010C	Preparation Plant (raw & wet)	2,800	15,768,000	2002	D060, D040, D041	MC, EM, ES
D040 ³	P003	Exhaust Fan and Dust Collector 1; removes PM from prep plant	N/A	N/A	1968	N/A	N/A
D041 ³	P003	Scrubber; removes PM from prep plant	N/A	N/A	1968	N/A	N/A
C16	061	Conveyor and Transfer Point	1,800	15,768,000	2002	D061	FE
C17	62	Conveyor and Transfer Point	1,800	15,768,000	2002	D062	FE
C18	063	Conveyor and Transfer Point	1,800	15,768,000	2002	D063	FE
017 ³	017A	Clean Coal Silo 1 - 10,000 ton capacity	-----	15,768,000	1968	D016	FE
C19	064	Conveyor and Transfer Point	1,800	15,768,000	2002	D064	FE
069	065	Clean Coal Silo - 25,000 ton capacity	4,000	15,768,000	2002	D065	FE
C20	066	Conveyor and Transfer Point	4,000	15,768,000	2002	D066	FE
C7A	067	Conveyor and Transfer Point	4,000	15,768,000	2002	D067	FE
C7	019, 021A	Conveyor and Transfer Points (clean coal to rail loadout or by-pass)	4,000	15,768,000	2002	D018	FE
SC1	STP2	Sample System Feed Conveyor	5	43,800	2002	NA	FE
CR1	STP3	Sample System Pulverizer	5	43,800	2002	NA	FE
SC2	STP4	Sample System Return Conveyor	5	43,800	2002	NA	FE
020 ³	021	Railroad Loadout 1 - 100 ton capacity	4,000	15,768,000	1968	D019	FE, TC
C8 ³	023	Conveyor and Transfer Point (rail loadout by-pass belt)	1,200	10,512,000	1968	D023	PE(conv eyor), FE (TP)

C9 ³	024A	Conveyor and Transfer Point (initial belt in power plant feed)	1,300	11,388,000	1968	D042	PE, EM
D042 ³	P002	Exhaust Fan 2 and Dust Collector 2; removes PM from transfer point	N/A	N/A	1968	N/A	N/A
C10 ³	N/A	Conveyor and Transfer Point (second belt in power plant feed)	1,300	11,388,000	1968	N/A	FE
032	032, 033, 032A, 033A, 035, 036	Clean Coal Stockpile 1 - 40,000 ton capacity (wind erosion, reclaim to conveyor, grading, dozer to reclaim, truck load-in, pan load-in)	-----	8,760,000	1986	D028, D033	UC, MC
C12 (034)	034A	Conveyor and Transfer Point (clean coal destock feeder)	1,200	10,512,000	1986	D023	PE(conveyor), FE (TP)
Refuse Circuit							
C21	068	Conveyor and Transfer Point (2010 - increased the maximum hourly throughput from 500 TPH to 800 TPH)	800	4,380,000	M 2010 2002	D068	FE
C11 (026)	027	Conveyor and Transfer Point (refuse) (2010 - increased the maximum hourly throughput from 500 TPH to 800 TPH)	800	4,380,000	M 2010 1981	D027	FE
C11A (026A)	C11A	Refuse Conveyor and Transfer Point (2010 - increased the maximum hourly throughput from 500 TPH to 800 TPH)	800	4,380,000	M 2010 1981	D027A	FE
028	029, 030	Refuse Bin 1 - 100 ton capacity - and Transfer Points (2010 - increased the maximum hourly throughput from 500 TPH to 800 TPH)	-----	4,380,000 ³	M 2010 1981	N/A	FE
C11B	C11B	Refuse Conveyor and Transfer Point (2010 - increased the maximum hourly throughput from 500 TPH to 800 TPH)	800	4,380,000	M 2010 1981	N/A	FE
RB2	RTP3	Refuse Bin 2 - 300 ton capacity - and Transfer Points (2010 - increased the maximum hourly throughput from 500 TPH to 800 TPH)	-----	4,380,000 ³	1981	N/A	FE
C11C	C11C	Refuse Conveyor	800	4,380,000	2010	NA	PE
RB3	RB3	Refuse Bin 3 - 300 ton capacity - and Transfer Points	-----	4,380,000 ³	2010	NA	FE
Miscellaneous							
031 ³	031, 031A	Refuse Disposal Area 1(wind erosion, grading)	-----	-----	1968	D033	WT
048A ³	048A	Lime Storage Silo 1 - 50 ton capacity			1971	N/A	FE
048B ³	048B	Lime Storage Silo 2 - 50 ton capacity			1971	N/A	FE
047 ³	047	Rock Dust Bin 1 - 50 ton capacity			1968	N/A	FE
052A-F	052A-F	Haulroads	N/A	N/A	N/A	D033	WT
Removed or Not Constructed Equipment Being Deleted From this Permit R13-2306D							

044 ³	046, 046B	Conveyor and Transfer Point (main conveyor from prep plant to power plant or clean coal silo conveyors)	1,300		1968 (removed)	D032	FE
045 ³	046A	Conveyor and Transfer Point (alternate conveyor from prep plant to clean coal silo conveyors)	1,000		1968 (removed)	D032	FE
013, ³ 015 ³	014, 016	Conveyors (2) and Transfer Points (clean coal to silo 1)	1,000		1968 (removed)	D013, D015	FE
A0	A0	Deep Mine Portal Belt Conveyor to A1	4,000	15,768,000	removed	DA001	FE
054	053E, 054E, 055E	Clean Coal Blending Stockpile - 50,000 ton capacity (truck load-in, wind erosion, endloader reclaim)	-----	1,000,000	2000 (not constructed)	053C, 054C, 055C	MC, MD
056, 058	056E, 057E, 059E	Stamler Feeder and Clean Coal Reclaim Conveyor and Transfer Points (clean coal drop into 056 from endloader, feeder to reclaim conveyor, reclaim conveyor to loadout belt)	1,500	1,000,000	2000 (not constructed)	N/A	MC, MD
C15	060	Conveyor and Transfer Point	2,800	15,768,000	2002 (not constructed)	D060	FE
C22	080	Conveyor and Transfer Point	1,800	15,768,000	2002 (not constructed)	D080	FE
C23	081	Conveyor and Transfer Point	1,800	15,768,000	2002 (not constructed)	D081	FE
C23	081	Conveyor and Transfer Point	1,800	15,768,000	2002 (not constructed)	D081	FE

¹ In accordance with 40 CFR 60 Subpart Y, coal processing and conveying equipment, coal storage systems, and coal transfer and loading systems constructed, reconstructed, or modified on or before April 28, 2008 shall not discharge gases which exhibit 20 percent opacity or greater. Coal processing and conveying equipment, coal storage systems, and coal transfer and loading systems constructed, reconstructed, or modified after April 28, 2008 shall not discharge gases which exhibit 10 percent opacity or greater. For open storage piles constructed, reconstructed, or modified after May 27, 2009, the permittee shall prepare and operate in accordance with a fugitive coal dust emissions control plan that is appropriate for site conditions.

² FE - Full Enclosure; PE - Partial Enclosure; ST - Stacking Tube; WS - Water Sprays; N - None.

³ These pieces of equipment are considered grand-fathered since they were constructed before June 1, 1974 for 45CSR13 and October 24, 1974 for 40 CFR 60 Subpart Y and have not been modified since then.

⁴ The maximum annual throughput for 028, RB2 and RB3 combined shall not exceed 4,380,000 TPY.

SITE INSPECTION

Lou Ann Lee of the DAQ's North Central Regional Office performed a full-on site inspection on September 24, 2008. The facility was found to be in compliance. Ms. Lee reviewed semi-annual self-monitoring reports received on March 31, 2009. Ms. Lee also reviewed semi-annual self-monitoring reports and 2008 Title V Annual Compliance Certification received on May 27, 2009.

Directions from Charleston are to take I-79 North, take Exit 125 for Shinnston, turn left onto State Route 131 West and travel to Shinnston, turn right onto U.S. Route 19 North, turn left onto County Route 3 and travel 2.8 miles, turn left onto County Road 3-4 and travel 1.2 miles to the preparation plant.

ESTIMATE OF EMISSIONS BY REVIEWING ENGINEER

Fugitive emission calculations for continuous and batch drop operations, transfer points, crushing and screening, storage piles, and paved and unpaved haulroads are based on AP-42 Fifth Edition "Compilation of Air Pollution Emission Factors", Volume 1. Control efficiencies were applied based on "Calculation of Particulate Matter Emission - Coal Preparation Plants and Material Handling Operations." The emission factors for crushing/breaking and screening operations were obtained from the Air Pollution Engineering Manual - Air & Waste Management Association - June 1992. The calculations were performed by the applicant and were checked for accuracy and completeness by the writer. The writer prepared a G10-C Excel spreadsheet to calculate the increase in emissions from the new project only for PSD purposes.

The proposed modifications will result in a decrease in the potential to discharge controlled emissions from point sources of 1.03 pounds per hour and 3.75 TPY of particulate matter (PM), of which 0.49 pounds per hour and 1.79 TPY will be particulate matter less than 10 microns in diameter (PM₁₀). The proposed modifications will result in an increase in the potential to discharge controlled emissions from fugitive sources of 135.13 pounds per hour and 323.34 TPY of particulate matter (PM), of which 37.48 pounds per hour and 79.89 TPY will be particulate matter less than 10 microns in diameter (PM₁₀).

The net change in emissions will be 134.10 pounds per hour and 319.59 TPY of particulate matter (PM), of which 36.99 pounds per hour and 78.10 TPY will be particulate matter less than 10 microns in diameter (PM₁₀).

The proposed modification will result in the following new estimated potential to discharge controlled emissions:

New Emissions Summary - Consolidation Coal Company R13-2306D	Controlled PM Emissions		Controlled PM ₁₀ Emissions	
	lb/hour	TPY	lb/hour	TPY
Fugitive Emissions				
Stockpile Emissions	2.46	10.74	1.17	5.11
Unpaved Haulroad Emissions	150.56	423.68	44.44	125.06
Paved Haulroad Emissions	0.00	0.00	0.00	0.00
Fugitive Emissions Total	<i>153.02</i>	<i>434.42</i>	<i>45.61</i>	<i>130.17</i>
Point Source Emissions				
Equipment Emissions	112.86	167.02	53.74	79.53
Transfer Point Emissions	40.24	97.48	19.16	46.42
Plant Exhaust Fans	5.20	22.78	2.48	10.84
Point Source Emissions Total (PTE)	<i>158.30</i>	<i>287.28</i>	<i>75.38</i>	<i>136.79</i>
FACILITY EMISSIONS TOTAL	311.32	721.70	120.99	266.96

REGULATORY APPLICABILITY

NESHAPS have no applicability to the proposed modified facility. The proposed modification of Consol's wet wash coal preparation plant is subject to the following state and federal rules:

45CSR5 To Prevent and Control Air Pollution from the Operation of Coal Preparation Plants, Coal Handling Operations and Coal Refuse Disposal Areas

The facility is subject to the requirements of 45CSR5 because it meets the definition of "Coal Preparation Plant" found in subsection 45CSR5.2.4. The facility should be in compliance with Section 3 (less than 20% opacity) and Section 6 (fugitive dust control system and dust control of the premises and access roads) when the particulate matter control methods and devices proposed are in operation.

45CSR13 Permits for Construction, Modification, Relocation and Operation of Stationary Sources of Air Pollutants, Notification Requirements, Temporary Permits, General Permits, and Procedures for Evaluation

The proposed modification is subject to the requirements of 45CSR13 because it will result in an increase in potential controlled emissions greater than six (6) pounds per hour and ten (10) tons per year of a regulated air pollutant (PM and PM₁₀) and involves the construction and modification of equipment subject to NSPS Subpart Y. The applicant has submitted an application for a modification permit. The applicant published a Class I legal advertisement in *The Exponent-Telegram* on January 4, 2010 and submitted \$1,000 for the application fee and \$1,000 for the NSPS fee.

45CSR16 Standards of Performance for New Stationary Sources
40 CFR 60 Subpart Y: Standards of Performance for Coal Preparation and Processing Plants

This facility is subject to 40 CFR 60 Subpart Y because it was constructed and will be modified after October 24, 1974 and will process more than 200 tons of coal per day. The proposed modification includes the addition of one conveyor (C11C) and one bin (RB3) and the modification of four existing refuse conveyors (C21, C11, C11A and C11B) and a bin (RB2), which are defined as affected facilities in 40 CFR 60 Subpart Y. Therefore, the proposed modification is subject to 45CSR16, which incorporates by reference 40 CFR 60 Subpart Y - Standards of Performance for Coal Preparation Plants. The facility should be in compliance with Section 254(a) (less than 20% opacity for coal processing and conveying equipment, coal storage system, or coal transfer and loading system processing coal constructed, re-constructed or modified on or before April 28, 2008) and Section 254(b) (less than 10% opacity for coal processing and conveying equipment, coal storage system, or coal transfer and loading system processing coal constructed, re-constructed or modified after April 28, 2008) when the particulate matter control methods and devices proposed are in operation.

45CSR30 Requirements for Operating Permits

In accordance with 45CSR30 Major Source Determination, the existing wet wash coal preparation plant is a major source which is subject to NSPS Subpart Y. The facility's potential to emit will be 136.79 TPY of a regulated air pollutant (PM₁₀) as defined in subsection 2.32, not including fugitive emissions from haulroads, which is greater than the 45CSR30 threshold of 100 TPY for a major source. Therefore, the facility will continue to be subject to 45CSR30 and classified as a Title V major source.

Changes authorized by this permit must also be incorporated into the facility's Title V operating permit. Commencement of the operations authorized by this permit shall be determined by the appropriate timing limitations associated with Title V permit revisions per 45CSR30.

The proposed modification of Consol's wet wash coal preparation plant is not subject to the following state and federal rules:

45CSR14 Permits for Construction and Major Modification of Major Stationary Sources of Air Pollution for the Prevention of Significant Deterioration

In accordance with 45CSR14 Major Source Determination, the wet wash coal preparation plant is not one of the listed sources under the definition of "Major Stationary Source" in subsection 2.43. The facility will have the potential to emit 287.28 TPY of a regulated air pollutant (PM), not including fugitive emissions, which is greater than the 45CSR14 threshold of 250 TPY for major sources. In accordance with subsection 2.4.3.d, this facility is not listed in Table 1, and so fugitive emissions are not included when determining source applicability.

The proposed modifications for this project (construct refuse conveyor C11C and refuse bin RB3; increase the round trip distance for refuse trucking from 0.5 miles to the proposed 2.2 miles; and increase the maximum hourly throughput rate of the existing refuse system from 500 TPH to 800 TPH) result in an increase in the facility's potential to emit (not including fugitive emissions) of 2.90 TPY of PM, of which 1.37 TPH will be PM₁₀. See the attached G10-C Excel spreadsheet for a summary of the change in emissions. These values are below the PSD trigger levels of 25 TPY for PM and 15 TPY for PM₁₀ which define a major modification. Therefore, the proposed modifications are not subject to the requirements set forth within 45CSR14.

TOXICITY OF NON-CRITERIA REGULATED POLLUTANTS

A toxicity analysis was not performed because the pollutants being emitted from this facility are PM (particulate matter) and PM₁₀ (particulate matter less than 10 microns in diameter), which are non-toxic pollutants.

AIR QUALITY IMPACT ANALYSIS

Air dispersion modeling was not performed due to the extent of the proposed modifications. This facility is located in Harrison County, WV, which currently has a status of attainment for PM_{2.5} (particulate matter less than 2.5 microns in diameter) and PM₁₀ (particulate matter less than 10 microns in diameter) .

MONITORING OF OPERATIONS

The coal handling equipment and storage areas should be observed to make sure that the facility is meeting the applicable visible emission standards. In accordance with 45CSR5 and 40 CFR 60.254(a), all emissions from coal processing and conveying equipment, coal storage system, or coal transfer and loading system processing coal constructed, re-constructed or modified on or before April 28, 2008 should be less than 20% opacity. In accordance with 40 CFR 60.254(b), all emissions from coal processing and conveying equipment, coal storage system, or coal transfer and loading system processing coal constructed, re-constructed or modified after April 28, 2008 should be less than 10% opacity.

The permittee shall maintain records of the coal throughput and the hours of operation. Compliance with the hourly throughput limit shall be demonstrated by dividing the calendar month's total throughput by the number of hours operated in the same calendar month to obtain an hourly average. By the fifteenth day of each calendar month, the permittee shall calculate the hourly averaged throughput of the previous calendar month. These records shall be maintained on site for a period of no less than five (5) years.

CHANGES TO CURRENT PERMIT R13-2306C

- Construct refuse conveyor C11C and refuse bin RB3
- After-the-fact inclusion of refuse conveyors C11A and C11B and refuse bin RB2 constructed in 1981
- Increase the round trip distance for refuse trucking from 0.5 miles to the proposed 2.2 miles
- Increase the maximum hourly throughput rate of the existing refuse system from 500 TPH to 800 TPH
- Delete conveyor A0, which was constructed and then removed
- Delete previously permitted but not constructed conveyors C15, C22, C23, C7B, reclaim feeder (056/057) for C7B and clean coal blending stockpile 054
- Include existing equipment not currently in the permit (A3A - 1994; SC-3, CR1 and SC2 - 2002; and C7A - 2002)

RECOMMENDATION TO DIRECTOR

The information contained in this permit application indicates that compliance with all applicable regulations should be achieved when all of the proposed particulate matter control methods are in operation. Due to the location, nature of the process, and control methods proposed, adverse impacts on the surrounding area should be minimized. Therefore, the granting of a permit to Consolidation Coal Company for the modification of their existing wet wash coal preparation plant located in Lumberport, Harrison County, WV is hereby recommended.

Daniel P. Roberts, Engineer Trainee
NSR Permitting Section

July 28, 2010
Date